

NEPTICULA POMIVORELLA, PACKARD; ALIAS MICROPTERYX POMIVORELLA, PACKARD.

BY AUGUST BUSCK, WASHINGTON, D. C.

During a visit to Professor Fernald, in Amherst, Mass., last spring, he showed me a *Nepticula*, bred from Apple, which he had described in manuscript as a new species, but which he afterwards had suspected to be *Micropteryx pomivorella*, Packard.

From reading the description and life-history of Packard's species, I felt sure that it was a *Nepticula* and presumably the same as Professor Fernald's species, and a week after, while studying the collection in the Agassiz Museum, Cambridge, I obtained definite proof that we were right.

There I found Packard's type—imago and cocoon—in rather poor condition, but easily recognizable as a typical *Nepticula* and similar to a large series of fine bred specimens in the U. S. National Museum.

The habit of this species of forming its cocoon on the twigs or the branches instead of descending to the ground, as is rather more common in the genus, makes the cocoon liable to be confounded with that of *Coptodisca* (*Aspidisca*) *splendoriferella*, Clemens, which is also frequently found in numbers on Appie.

Both have been mistaken for scale insects.

By a common hand-lens, however, they can be easily separated, as the *Nepticula* cocoon is made of matted silk, while the *Coptodisca* cocoon consists of two small, oval, pieces of the epidermis of the leaf cut out and spun together at the edges and fastened to the twig by small short silk bands.

The mines of the two insects are also easily distinguished, that of the *Nepticula* being a long narrow serpentine track only slightly widened as the larva grows, and, if empty, with a semicircular slit at the end in the upper epidermis, through which the larva has escaped; while the *Coptodisca* mine, which also begins as a narrow track, soon broadens out into a several times wider, more or less circular blotch, and when empty shows the oval hole in the leaf, where the larva has cut out the upper and lower epidermis for its case.

To distinguish between the shining dark *Nepticula* imago with its tufted reddish-yellow head and the large eye-caps and that of the equally shining light-coloured smooth-headed *Coptodisca* does not of course present any difficulties.

The following are some of the more important references only to:

Nepticula pomivorella, Packard; *Micropteryx pomivorella*, Packard, 17th Ann. Rep. Bd. Agr., pp. 237-8, 1870; Amer. Naturalist, Vol. IV., p. 685, 1871; Hayden, Bull. Geo. Survey, Vol. IV., p. 157, 1878; J. B. Smith, List of Lep. No. 6020, 1891; Bull. No. 26 (new series), Dept. of Agr., p. 94, 1900.